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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT PAPER NUMBER

2859

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|-------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/046,273 | KACZYNSKI, ULRICH |
| Examiner | Art Unit | |
| Gail Verbitsky | 2859 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-20 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1.) Certified copies of the priority documents have been received.
 2.) Certified copies of the priority documents have been received in Application No. ____.
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim 12 is objected to because of the following informalities: Perhaps applicant should insert –protruding—before “component” in line 2 for proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: it is not clear how a light source and a receiving element are structurally related to an impact detection element and a housing part, as stated in claims 1, 10 and 18.

Claim 18: the “optical component” in line 2 makes the claim language confusing because it is not clear what applicant means, and what structural relationship between the optical component and other elements of the device are. Does applicant mean an optical fiber? Is this a proper interpretation of the invention? Furthermore, please note, that in the rejection of claim 18 on the merits, the examiner considers that the “optical component” is an optical transmitting fiber.

Claims 2-9, 11-17 and 19-20 are rejected by virtue of their dependency on claims 1, 10 and 18 respectively.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1- 4, 6-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer et al. (U.S. 6263733B1) [hereinafter Reimer] in view of Mock (U.S. 5664034).

For claims 1-4, 6-9, 18-20: Reimer discloses in Figs. 1 and 5 a sensor comprising a flexible (elastic) compressible impact detector (foam block) 24, 94 connected to a housing part 12 via a plate 16. The device further comprising a transmitting/ receiving device (optical component) connected to the housing part and having a light source emitting light (having an emission surface) and a receiver (receiving element) and transmitting light to a processing device so as to determine the impact (evaluate information) and to control the device. In a broad sense, the impact detection element is shaped as a cylindrical rod attached to the housing part, as shown in Fig. 5.

For claims 10: Reimer discloses in Figs. 1 and 5 a device comprising a housing part 12, connected to a protruding component 16, a compressible, bendable (elastic) impact detection element 24, 94 movably connected to the housing part 12, a light source defining an emission surface and a receiving element defining a receiving

surface. The impact detection element 24, 94 at least partially surrounds the component 16. In a broad sense, the impact detection element comprises a cylindrical rod (Fig. 5).

Reimer does not explicitly state that the light source having an emitting surface opposite to the receiver, as stated in claim 1, and the particular light source and the receiving element as claimed by applicant in claims 2-4, 6-14, 16-20.

Mock discloses in Fig. 1 a device comprising a transmitting/receiving device having a light source having a light-guiding fiber 27 and an emission surface 26 defined by the end of said fiber, the emission surface is corresponding (opposite) to a receiving surface 29 and directed to a photodetector 34 (intensity sensor) of a receiving fiber 31. the output of the intensity sensor 34 is applied to a CPU 39 which controls a movement (impact) of an armature 19. The intensity sensor 34 generates an electrical signal corresponding to the intensity of the light emitted which is used to control the device. In a broad sense, the armature is moving due to an impact (physical move). A Grin-rod lens 28 of the receiving fiber 31 (reflective surface)focusing and directing light along the fiber 31 so as to minimize losses.

For claim 2: As shown in Fig. 1, the receiving surface and the emission surface are of substantially the same size.

For claims 10, 18: with respect to the preamble of claim 18: the preamble of the claim has not provided enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not

depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

With respect to « whereby”, as stated in claims 3 and 13: it has been held that the functional “whereby” statement does not define any structure and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

With respect to claim 8: the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the light source and the receiver, disclosed by Reimer with a light source and the receiver, as taught by Mock, because both of them are alternate types of light transmitting/ receiving devices which will perform the same functions if one is replaced with the other.

7. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer and Mock as applied to claims 1- 4, 6-14 and 16-20 above, and further in view of GB 2185359 A [hereinafter GB].

Reimer and Mock disclose the device as stated above in paragraph 6.

They do not explicitly disclose that the receiver has a reflective surface to direct the light to the at least one optical fiber, as stated in claims 5 and 15.

GB teaches in Fig. 1 a device whose receiver (6, 15, 4) having a reflective surface (mirror) 4 directing (reflecting) a light illuminated (emitted) from a fiber (light source) 7 onto a receiving fiber 6 of a receiver 15.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a reflective surface (mirror) as taught by GB, to the device disclosed by Reimer and Mock, so as to direct the emitted radiation directly onto a transmitting fiber and eliminate losses of the radiation.

Conclusion

8. The prior art made of record and not relied upon considered pertinent to applicant's disclosure.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Verbitsky who can be reached at (703) 306-5473 Monday through Friday 7:30 to 4:00 ET.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-5473.

GKV

Gail Verbitsky
Patent Examiner, TC 2800



April 03, 2003